

Claims:

1. Refrigerant composition comprising a chlorine-free hydrofluorocarbon based refrigerant and, mixed therewith, a lubricant containing a polyol ester, characterized in that the polyol ester comprises a mixture of an ester of 3-hydroxy-2,2-dimethyl-propyl-3-hydroxy-2,2-dimethylpropionate and

5 - an ester of trimethylol propane, trimethylol ethane, pentaerythritol or 2,2,4-trimethylpentadiol, the amount of the 3-hydroxy-2,2-dimethyl-propyl-3-hydroxy-2,2-dimethylpropionate being at least 50 mol-% of the polyol residue of the ester mixture,

10 *Sub B'* - an ester of 2-butyl-2-ethyl-1,3-propanediol, the molar ratio of the 2-butyl-2-ethyl-1,3-propanediol and the 3-hydroxy-2,2-dimethyl-propyl-3-hydroxy-2,2-dimethylpropionate being 5:95 - 99:1, or

15 - a polyol ester of neopentylglycol, 2-ethyl-1,3-hexanediol or 1,4-dimethyloctocyclohexane.

2. The refrigerant composition according to claim 1, wherein the polyol ester mixture is prepared *in situ*.

20 *Sub B'* 3. The refrigerant composition according to claim 1 or claim 2, wherein the carboxylic acid residue of the polyol ester is derived from a linear or branched C₄...C₁₈-carboxylic acid, or an anhydrides thereof, or it is derived from a mixture of linear or branched C₄...C₁₈-carboxylic acids or anhydrides thereof.

25 4. The refrigerant composition according to claim 3, wherein the carboxylic acid residue is derived from 2-ethylhexanoic acid, heptanoic acid, octanoic acid and/or lauric acid.

5. The refrigerant composition according to claim 1, wherein the carboxylic acid residue of the ester is derived from a mixture of mono- and dibasic carboxylic acids.

30 6. The refrigerant composition according to claim 5, wherein the monobasic carboxylic acid residue is derived from linear or branched C₄...C₁₈-carboxylic acids or anhydrides or mixtures thereof.

35 7. The refrigerant composition according to claim 5 or claim 6, wherein the dibasic carboxylic acid residue is derived from oxalic acid, malonic acid, dimethylmalonic acid,

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succinic acid, glutaric acid, adipic acid, sebasic acid, pimelic acid, suberic acid or azelaic acid, or a cyclic anhydride such as succinic anhydride or an alkyl derivative thereof, or trimellitic anhydride.

5 8. The refrigerant composition according to any of claims 5 to 7, wherein the molar ratio between the mono- and dibasic carboxylic acids is 50:50 to 95:5.

10 9. The refrigerant composition according to any of the preceding claims, wherein the fluorinated hydrocarbon based refrigerant is hydrofluorocarbon 134, hydrofluorocarbon 134a, hydrofluorocarbon 143, hydrofluorocarbon 143a, hydrofluorocarbon 152 or hydrofluorocarbon 152a or a mixture of hydrofluorocarbons.

15 10. Complex esters of 3-hydroxy-2,2-dimethyl-propyl-3-hydroxy-2,2-dimethylpropionate which contain residues of both mono- and dibasic carboxylic acids, the molar ratio between the mono- and dibasic carboxylic acid residues in the ester being 50:50 to 95:5.

20 11. The complex esters according to claim 10, wherein the monobasic carboxylic acid residues are derived from linear or branched C₄...C₁₈-carboxylic acids or anhydrides or mixtures thereof.

25 12. The complex esters according to claim 10 or claim 11, wherein the dibasic carboxylic acid residues are derived from oxalic acid, malonic acid, dimethyl malonic acid, succinic acid, glutaric acid, adipic acid, sebasic acid, pimelic acid, suberic acid or azelaic acid, or a cyclic anhydride such as succinic anhydride or an alkyl derivative thereof, or trimellitic anhydride.

30 13. The complex esters according to any of claims 16 to 19, mixed with esters and/or complex esters of another polyol.

14. The complex esters according to claim 13, wherein the esters are in a mixture of esters and/or complex esters of NPG or BEPD.

15. The use of an ester according to any of claims 10 to 14 as base oils for lubricants.